

REMARKS/ARGUMENTS

Summary

Claims 1-6 are pending in the application. Claim 1 has been amended. Applicants have added claim 7. Claims 1-7 are pending in the application. The amendments to the claims are supported in the specification. No new matter has been added.

Rejection of Claims

35 U.S.C. § 112

The Examiner has rejected claims 1-6 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claims the subject matter which the Applicants regards as the invention. Applicants have amended claims 1-6 to particularly point out and distinctly claim the subject matter. Applicants respectfully request the Examiner to withdraw the rejection and allow claims 1-6.

35 U.S.C. § 103

In the Office action, the Examiner rejected claims 1- 6 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Davies et al. (U.S. Patent No. 6,224,760). Claim 1 has been amended. Applicants respectfully traverse this rejection.

Amended claim 1 recites, “wherein the elongated rib body (111) of said first bed support rib (107) has a front portion that extends from the first radial position (R1) near the center of the plate and a back portion of the elongated rib body (111) that extends to the outer radial position nearer to the periphery (109), wherein the elongated rib body (111) has at least one tapered middle portion positioned near an intermediate radial position (R2, R3) characterized by the rib width of the elongated rib body (111) in the tapered middle portion being smaller than a maximum width of said rib body in the front portion and being smaller than a maximum width of said rib body in the end portion..”

Thus, the structure in claim 1 has an elongated rib body 111 that has several different portions that are sized smaller than a portion of the intermediate bed support rib 117 and the portion of the intermediate bed support rib 119. Also, by viewing Figs. 2a and 2b pictorially the elongated rib body 111 has several portions where a middle portion of the elongated rib body 111 is smaller than a portion of the intermediate bed support rib 117 and where the back portion of the elongated rib body 111 is smaller than a portion of the intermediate bed support rib 119 (Specification, page 6, lines 1-28, FIGs. 2a and 2b). This elongated rib body 111 having varying portions along the portion of the intermediate bed support rib 117 and the portion of the intermediate bed support rib 119 reduces or eliminates discontinuities in the cross sectional area of the channels formed between ribs. Further, in order to reduce discontinuities in the cross sectional area of a channel at the radial positions where there are first and second intermediate support ribs 117, 119, the width of each

elongated body 111 at any radial position is adapted to partly or completely compensate for the reduction in channel cross sectional area caused by the presence of the intermediate bed support rib 117. (Specification, page 5 lines 29-33 and page 6, lines 1-28).

Davies et al. provides “A chromatography column having an end arrangement including an end plate having a fluid opening and a filter extending over an internal surface of the end plate to define a fluid low zone between them into which the fluid flow opens is disclosed. There is a liner between the end plate’s internal surface and the filter layer. The liner has a surface relief pattern to space the filter layer from the end plate and maintain the fluid flow zone across the filter.” (Abstract). The liner 9 also includes special features such as “major ribs 10a that extend substantially from the inner to the outer edge of the liner 9, while shorter set of ribs 10b, 10c and 10d are distributed between these, progressively away from the centre, to maintain the level of occupation of the flow zone by rib projections and therefore maintain a generally uniform support behind the filter layer 14, 15.” (Column 3, lines 45-60). However, Davies et al. does not anticipate, suggest or disclose an elongated rib body 111 that has several different portions that are sized smaller than a portion of the intermediate bed support rib 117 and the portion of the intermediate bed support rib 119. In addition, Davies does not anticipate, suggest or disclose that the ribs 10a, 10b, 10c or 10d has a smaller size than a portion of the intermediate bed support rib 117 (relative to the other ribs 10a, 10b, 10c, or 10d) and a portion of the intermediate bed support rib 119 reduces or eliminate discontinuities in the cross sectional area of the channels

formed between ribs 10a, 10b, 10c, 10d. In fact, Davies et al. specifically points out “The pattern of ribs as such is not critical, and may correspond to patterns already known for machining into an end plate.” (Column 3, lines 60-65). Thus, it was not anticipated, suggested or obvious to Davies et al. to have a size smaller than 10a, 10b, 10c or 10d since as Davies et al. points out is not critical to have a certain “pattern or ribs” where for this invention it is critical to have a certain pattern or various portions for an elongated body 111 that are smaller in size to ribs 117 and 119 in order to reduce or eliminate discontinuities.

Even though, the Examiner states “However, if a difference exists between the claims and Davies (U.S. Patent No. 6, 224, 760), it would reside in optimizing the elements of Davies (U.S. Patent No. 6,224,760). It would have been obvious to optimize the elements of Davies (U.S. Patent No. 6,224,760) to enhance separation” (Office action, page 2, lines 16-18 and page 3, lines 1-2). The Davies reference FIG. 2 pictorially is distinguishable from FIGs. 2a and 2b, which shows that the elongated body 111 has various portions that have a smaller size than a portion of the intermediate support rib 117 and a portion of the immediate support rib 119. The smaller size portions of elongated rib body 111 is necessary to reduce discontinuities in the cross sectional area of a channel at the radial positions where there are first and second intermediate support ribs 117, 119, the width of each elongated body 111 at any radial position is adapted to partly or completely compensate for the reduction in channel cross sectional area caused by the presence of the intermediate bed support rib 117.

Therefore, it is not obvious for Davies et al. to have an elongated rib body 111 have small sized portions compared to the intermediate support rib 117 and the intermediate support rib 119.

With respect to the Examiner's comments, "Davies (U.S. Patent No. 6,224,760) is considered to inherently have the recited local effective channel height because it has tapered ribs. As such, the claims are considered to read on Davies (U.S. Patent No. 6,224,760)'s Figure 3 tapered intermediate ribs." (Office action, Page 3, lines 6-9). In order to rely on a theory of inherency, the **Examiner must provide a basis in fact and/or technical reasoning to reasonably support** the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy*, 17 USPA2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original) cited in *MPEP* §2112. Furthermore, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) cited in *MPEP* §2112. If the Examiner wishes to maintain the support for the claim rejections based on a theory of inherency, the Examiner is respectfully requested to provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BD. Pat. App. & Inter. 1990) (emphasis in original) cited in *MPEP* §2112.

For the foregoing reasons, claim 1 is not anticipated or in the alternative

obvious over Davies et al. Claims 2-6 depend from independent claim 1. Therefore, claims 2-6 are also not anticipated by or obvious in view of Davies et al. as claims dependent upon allowable base claim 1. Applicants request the Examiner to withdraw the rejections of claims 1-6 as amended.

New Claim

Applicants have added new claim 7. The specification supports the addition of the new claim. (Specification, page 5, lines 13-28). No new matter has been added. Applicants respectfully request the Examiner to consider and allow the new claim.

Conclusion

Pending claims 1-6 and new claim 7 are patentable. Therefore, in view of the above amendments, Applicants respectfully submit that this application is in condition for allowance and such action is earnestly requested. If for any reason, however, the Examiner feels that a telephone interview would be helpful in resolving any remaining issues the Examiner is respectfully requested to contact Applicants' undersigned attorney.

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Early and favorable consideration is respectfully requested.

Respectfully submitted,

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